The Maryland Fruit Grower

Published Monthly by the Maryland State Horticultural Society

Edited by the Secretary, A. F. Vierheller, Extension Horticulturist

Vol. 8 **January, 1938** **No. 1**

THE FORTIETH ANNUAL MEETING

The Maryland State Horticultural Society held its Fortieth Annual Meeting at Lord Baltimore Hotel, Baltimore, on January 11 and 12, 1938. The weather was not favorable, but the attendance was rather good. Due to lack of space, there were no commercial exhibits, and the annual dinner was not held. Much interest was added to the meetings by the farm products exhibits, including an Apple Show which, while not large, was of good quality.

Mr. C. E. Bryan, President, stated that last year, he had told growers that the good year that they had experienced should not lull them into a sense of false security, but they should continue to improve their product. However, there seemed to be a spirit of careless packing, setting a low price, and allowing our competitors 3000 miles away to take our markets because they packed a standard product. The pre-January market is a good one, but this year, poor fruit spoiled it. For this reason, the Middle Atlantic Fruit Growers' Conference was established, hoping to get more growers into a common group to solve their problems on a larger scale. Agriculture is the last industry going along alone, in a world of competition. Our production problems are not all solved, but marketing, regulation, transportation, spray residue, etc., need cooperative action. It is the money spent, not in growing apples, but in growing *good* apples that counts. This may require tree removal or abandonment, but good apples are the objective, and good apples make the fruit growing industry.

Dr. J. W. Roberts, Senior Pathologist of U. S. Bureau of Plant Industry told of work with copper phosphate in disease control. This material is cheap, and more soluble than copper sulphate, also causing little injury, and controlling phoma or Brooks spot, black-rot leaf spot, and light blotch. Strong Bordeaux only, is effective in bitter rot control. Lime sulfur is still the best scab spray. Zinc sulfate-lime mixture has greatest benefit in spray-burn prevention on peach. Stickers and spreaders may stick spray on too tightly, or may cover the spray material particles, or even the disease spores, protecting them. Spreaders may over-spread, thinning the spray coating. Use of sulfur dust in the peach brusher-grader is good, as brushes remove fuzz, and rot spores can enter fruit more easily. Zinc-lime spray for bacterial spot, should be directed at the under sides of leaves. There is little help in removing bacterial cankers, as many will be missed. Removal of brown rot mummies from peach trees helps only in preventing twig girdling. There seems to be little benefit from removal or covering of mummies under peach trees, except in orchards where blossom blight is bad. Removal of mummies helps greatly in control of apple bitter rot. Only persistent spraying has kept this disease down where it is. If diseases are down, keep them down. Don't be a good sport with any disease.

Dr. I. C. Haut discussed the testing of fruit maturity by pressure plunger, and showed how testing has been done by an electrical tester that varies with temperature of fruit. By observing the readings on fruits picked at various times, and plotting these readings on curves, a loss of starch in Jonathan was determined, and a simple test developed so that growers can determine the best picking time for this variety. Grimes did not fit into the plan so well, but starch loss and color development showed some relation. Microscopic sections cut from stem and spur indicated that the ease of separation of fruit from the spur are still one of the best indications for picking, as after several years' results, there seem to be relationships between the tree and the fruit that are not understood.

Dr. W. S. Hough, Entomologist, Winchester (Va.) Field Laboratory stated that while the dormant spray is costly, running about 1.40 to 1.50 per 100 gallons, it controls a lot of pests. In scale control, best results are had when the loose bark is scraped from the trunks and larger lower limbs, as the scale insects hide under bark scales. Lady bug beetles should not be destroyed, as they help control scale. Cherry scale is more abundant east of the Blue Ridge, than is San Jose scale. San Jose scale makes a red stain on fruit,

The Progressive Orchardist Plans and Plants for the Future

Fruit Growing Still Remains One Of the Most Profitable and Dependable Branches of Agriculture

Statistics show that millions of fruit trees have died in the past few years from disease and low winter temperatures, other millions are in a weakened condition to the point where they are unproductive and unprofitable. Again they show new plantings of fruit trees to be far below normal and have been for more than ten years.

Are You Planting

To Maintain Your Production 10 Years—20 Years from Now?

Plan To Plant This Year

Keep your orchards on a profitable basis by selecting the best varieties obtainable in newer and better fruits such as:

BLAXTAYMAN
RICHARED DELICIOUS
YELLOW DELICIOUS
GOLDEN JUBILEE
ELBERTA
SHIPPERS LATE RED
The "COLORA" Red York
CORTLAND
GALLIA BEAUTY, Red Rome
VEDETTE
HALE HAVEN
GAGE ELBERTA

These varieties are proving and maintaining their leadership.

WE SPECIALIZE IN

Apple and Peach Trees—Strawberry, Raspberry, Asparagus Plants—and Grape Vines

We offer one of the most up-to-date and practical listings of new and improved fruits available to the planters today.

"It Pays to Plant Bountiful Ridge Grown Trees, Plants, Seeds."

Bountiful Ridge Nurseries

PRINCESS ANNE, MARYLAND

Service **Dependability** **Satisfaction**

but cherry scale does not stain. Fall spraying has controlled the scales as well as spring sprays, but aphis eggs are not killed as easily in fall, unless the spray mixture is stronger. The viscosity or flowability of oils is important only as to quickness of drying of the spray after application. Lime sulfur seems to have an effect in keeping down the summer broods of San Jose scale, when applied as delayed dormant spray. Small amounts of lime sulfur added to dormant oil sprays seemed to increase the kill of scale. Scurfy scale was cleaned up with 3% petroleum oil and 2.5% tar oil. Two per cent petroleum oil with 9 or 10 ounces of Di-nitro-cyclo-hexyl-phenol (let's call it di-nitro) also gave excellent scurfy scale control as dormant spray. Di-nitro, and the tar distillate oils are the best aphis-egg killers. Oil injury occurs only where oil is applied too late, causing bud injury. Oil-cresylic acid is good only for about 2 or 3 days when leaves are at squirrel-ear stage, for aphis control, and oil alone seems about as good. Terrapin scale is best controlled with 2 to 3% oil spray applied in fall and again in spring.

Mr. Carroll R. Miller, Appalachian Apples, Inc., stated that the American stomach held about 1 ton of food annually, and that the apple was not filling its share of that ton. With about half the tonnage as that of apples, citrus growers are spending 2 million dollars annually in advertising. There are 8 regional apple advertising units, with about ½ million dollars for advertising, this year. The main work of Appalachian Apples has been centered around the grocer, as he sells the apples. There have been national apple sales drives, and there will be more regional campaigns. In some past campaigns, there has been 300% increase in sales over 1937 during same weeks. Appalachian has placed 35,000 ad. sets in stores. There has been the largest buying of apples, this year, in history, and advertising must take some of the credit. There is some prospect of a national advertising plan, made up of the regional organizations. All growers, large and small, must subscribe, for real results.

Mr. C. E. Bryan discussed the Eastern Apple Box or Crate, and the Society voted to make the standard box of 1 1/5 bushels capacity, instead of having 3 different boxes, as at present.

Mr. C. Graham, Assistant Entomologist, University of Maryland, stated that codling moth infestation is heaviest in Eastern Shore, being about twice that of Western Maryland, with Central Maryland well between these extremes. There had been a decrease in some orchards due to better machines, and coverage, but the State average is increasing, due to slip-ups in control in some orchards. He recommended scraping and banding of trees, screening of container storages, and stated that the Spray Service Cards were timed to moth activity, not by guess-work.

Dr. G. S. Langford, Associate Entomologist, University of Maryland, listed over 200 host plants of Japanese Beetle, and showed the immense numbers of beetles that are caught in some of the infested areas. He outlined the Maryland plan of retarding the beetle. Sections will be classed as to infestation, and recommendations made accordingly. Where heavy, control will be attempted, and where light, retarding methods will be used. The campaign is thoroughly outlined, and will be supported by county, state, city and personal funds. The insect will add thousands of dollars to the county spray bills. All persons should take interest in the campaign, and should write Dr. Langford for details.

Mr. J. M. Lambert, Refrigeration Engineer, York, Pennsylvania, stated that sheet cork was the best insulation for the cold storage. Keep insulation dry, and use proper machinery for insulation used. Consider the power costs, and water supply in selecting type of refrigeration used. Handling of fruit to be stored is important, and in storage, the temperature, humidity, ventilation and air circulation must be considered. He gave some excellent discussions of various types of machinery, and cautioned growers to plan storages for head room, and weight of equipment to be suspended from ceilings. Fruit must be so stacked to allow for ventilation, and air circulation, and humidity must be right for best results.

Dr. H. C. Diehl, U. S. Frozen Pack Laboratory, Seattle, Washington, reported that vegetables were the most important frozen pack foods at present. The advantages of frozen fruits and vegetables are that they are frozen fresh, directly from the fields; and have almost original vitamin content. However, the transportation problem is not entirely solved. Some Mid-Western sections have freezing lockers for use of farmers, which has helped the frozen food business. There are still problems to be solved, in freezing of fruits, as some of the better varieties do not freeze well, due to discoloration. Some better varieties may have to be bred for freezing use.

Mr. W. S. Campfield, Secretary, Virginia State Horticultural Society deplored that we were advertising fruit and selling poorest stuff. The Northwest growers have a chance to take our markets if they reduce their production cost. Laws won't help to keep low-grade fruit off market, as some dealers want cheap stuff, and many growers

would fight regulation. There is hope in putting a bottom in the poor grades to keep out the worst fruit. He felt that Eastern growers could not adopt the Wesern box, due to lack of good lumber, bad packing, and careless grades going into boxes. He found fruit in distant markets from our area, that showed terrible bruising. He believed that the Eastern box would become standard in some markets, but cautioned against loss of box reputation by packing any variety in it, and packing a poor grade. It costs about 5c more to pack a box, than a bushel. Some growers pack a jumble pack in the box, and others wrap the fruit and count the number in the box. There is some feeling that Fancy grade only, should go into the Eastern box.

Mr. R. H. Sudds, Assistant Horticulturist, West Virginia University, suggested great care in selection of frost-proof peach orchard sites. His detailed review of bud freezing showed that discolored buds may even bloom and set fruit, or may bloom but drop. Some buds have frozen at 10 above zero, while others froze at 23 below. Sudden changes were most serious. Growers might work to keep the trees in late dormancy, but this is not safe and may delay the time of bloom and set. Buds at end of twigs freeze first. Hardier varieties are being bred, but the quality must be considered as the consumer is the one to be pleased.

Mr. Earnest Walker, Assistant Pathologist, University of Maryland, described storage scab of apple, and cautioned against keeping the storage too wet. Storage scab is not transmitted from apple to apple, but is on fruit, he believed, before going into storage. The scab will grow at 32°, and increases rapidly in growth as temperatures rises to 60, where growth is retarded. Humidity is even more important than temperature in causing scab growth. Suggested a weak Bordeaux spray if apples show new scab spots, and weather is wet just before picking time. If bitter rot is also serious, the stronger Bordeaux sprays for that disease should control late scab on the fruit.

Dr. A. L. Schrader, Head, Horticultural Dept., University of Maryland, discussed results of a national survey on culture of apples and peaches, conducted in cooperation with horticulturists of 40 states. All states reported use of fertilizer, but many states indicated need of more fertilizer on cover crops and sod. In a few cases, a modified sod-culture was used in peach orchards, but clean cultivation-cover crop system largely prevailed. There were 21 different cover crops for peaches, and 16 different covers used for apples. Rye, vetch, cowpeas, soybeans, blue grass, alfalfa, and sweet clover were most common sod crops. Mulching is gaining favor. Recommendation for Maryland conditions include: (1) Careful planting and care of young trees, including use of mulch and complete fertilizer after the tree has begun to grow. (2) Use of mixed fertilizers for cover crop; 3-12-6 for non-legumes, and 0-14-6 for legumes. (3) Keep cover crop or intercrop well away from trees, especially if crop is sown before July 1. (4) Apply fertilizers in fall (Sept. 15 to Nov. 15) for peaches and apples. Split the application between fall and spring, if large amount is used per tree. (5) For tree applications, use more slowly available nitrogen materials (cyanamide, ammonium sulfate, etc.) in the fall. Nitrate of soda should not be used in fall on light soils. (6) Used mixed fertiizer on sod orchards for sod growth: 3-12-6 to non-legumes and 0-14-6 to legumes in late summer or early fall.

CAN WE ASSIST YOU?

This organization lends money to sound fruit growers to finance the production of their crops—to pay cash for their purchases and save the discount. The interest rate is 5%, for the time the money is actually used. We serve growers in Virginia, West Virginia, Maryland, Pennsylvania and Delaware. Perhaps we can assist you.

East Central
Fruit Growers Production Credit Association
Hagerstown, Md.

Grow ém big and healthy *with* STAUFFER SULPHURS

Growers Asked For It -- Here It Is

"Magnetic" Catalytic Sulphur—A safener for Lead Arsenate-Lime Sulphur spray combinations. It blocks the formation of injurious soluble arsenical compounds and black lead sulphide sludge, which occur when these two are combined.

Stauffer manufactures more than 20 brands of Agricultural Sulphurs —a definite grade for every type of equipment and for every known insect and fungous growth controlled with Sulphur. Your local Stauffer Dealer also carries our complete line of double-duty dusts. Powerful insecticides combined with Sulphur as the carrying agent, to control insects and plant diseases with one application.

Make your Stauffer Dealer headquarters for your spraying and dusting needs.

A FEW STAUFFER PRODUCTS

"Magnetic-Spray" Wettable Sulphur
"Electric" Super-Adhesive Dusting Sulphur
"Crown" Brand Wettable Sulphur
"Magnetic" Humidust
"Swan" Brand Dusting Sulphur
"Perfection" Brand Dusting Sulphur
"Owl" Brand Dusting Sulphur

◆

STAUFFER CHEMICAL CO.

420 LEXINGTON AVE.
NEW YORK CITY
CHICAGO, ILL.
FREEPORT, TEXAS

Stauffer CHEMICALS

Stauffer

MIDDLE ATLANTIC FRUIT GROWERS' CONFERENCE HOLDS FIRST MEETING

The Middle Atlantic Fruit Growers' Conference composed of growers of the states of Pennsylvania, Maryland, West Virginia, Delaware, Virginia and New Jersey held its first meeting in Washington, D. C., on January 4th and 5th. This organization was sponsored by Maryland State Horticultural Society, and successfully organized under able leadership of President C. E. Bryan.

Half days were given to discussion of Peach and Apple Orchard Nutrition; Apple and Peach Spraying, including spray injury and residue removal; Publicity, Advertising and Economics; and a summarized discussion of practices that the grower might follow under present conditions within the industry. Mr. Sam Fraser of the International Apple Association was the dinner speaker, discussing National and International Marketing Problems of the fruit grower. Dr. W. W. Skinner, U. S. Bureau of Chemistry and Soils described the unlimited possibilities in use of agricultural products for industrial manufacture of many things.

The main points brought out by discussions of the several able speakers, followed by growers' discussions, were that we are in the midst of an era of research of new materials and methods, which must be applied in accordance with varied conditions encountered. Cost of production per tree and per bushel are of prime consideration in relation to profits realized. Moisture and nitrogen supply seem best under mulched trees. There seemed to be little difference in yield where nitrogen fertilizer was applied in fall or spring, and little difference in kind of nitrogen fertilizer used, if used properly. However, there may be effects on soil acidity. Healthy foliage is necessary and a supply of moisture and nitrogen must be maintained, as they are often limiting. Complete fertilizer on cover crops, generally, was advised. Potash deficiency occasionally has been found. Where cover crops covered the ground the greater part of the time during the growing season, in bearing peach orchards, the soil moisture was affected, but may be a promising cultural system, especially for erosion control. Sweet clover and lespedeza are possible crops to use in bearing peach orchards. Some interesting data showed that internal breakdown in Gano apple was easily corrected by use of small amounts of boric acid as a soil application, but must not be used again until trouble reappeared. Some Pennsylvania work showed that there is danger in use of too dilute lime sulfur in scab control, and also a point where stronger spray may cause spray injury. In general, the injury was not sulfur injury, but arsenic injury. Lime was a good "Safener". There was no apparent difference in keeping quality of fruit properly washed and handled. Fruit should be handled carefully and stored immediately after washing. Fruit going into storage either wet or dry kept equally well. Timing of sprays and number of sprays depends on the effect of elevation, latitude and length of growing season on insect development.

Apple advertising must be directed at the housewife, as she does 85% of the buying. Growers should make every effort to put appearance into their fruit and package. The grocer is the man who should be closely contacted, as he sells the apples. We cannot pack fruit in any container for any market. Study the market wants, and pack certain varieties in barrel, basket or Eastern box as necessary. A standard box is needed, and the 1 1/5 bushel looks good.

As a summary of suggested orchard practices, it was advised that poor trees or varieties be removed, and that growers carry on their various practices depending upon past practices in economizing at any certain point in their orchard program. More yield of good varieties, storage facilities at orchard, lower harvest and packing costs are advised. To economize, let up on pruning but not on spraying.

Officers for the coming year are: C. E. Bryan, Maryland, President; A. F. Vierheller, Maryland. Secretary-Treasurer pro tem; and an Executive Committee of H. W. Skinner. Pennsylvania; F. H. Wissler, Virginia; G. S. L. Carpenter, Maryland; C. W. Smith, Delaware; Bryon Roberts. New Jersey. These men and two others from their States will compose the Board of Directors.

The purpose of this Conference is not to supplant the Horticultural Societies, but to work with them, and afford growers of the region a greater opportunity to get together and discuss and act upon problems affecting the region as a whole.

THE ANNUAL AFFAIR

The fiscal year of the Society begins January 1, and membership fees for 1938 will be gratefully accepted by the Secretary. Just send your cash, check or money order to A. F. Vierheller, College Park, Maryland. The Proceedings are sent only to paid memberships. A strong membership makes an effective Society. Better send that dollar NOW.

RED YORKING

TRADE MARK REG.

U. S. Plant Patent No. 125

FOR BETTER COLOR

Plant the original strain of the New Red Yorking (U. S. Plant Patent No. 125) for better color. A new solid Red York with every characteristic of the York Imperial, except that the fruit colors a bright cherry red to the blossom end.

Other varieties of apple trees available:

Albermarle Pippin
Baldwin
Black Jon
Black Mack
Bonum
Cortland
Delicious
Duchess
Early Harvest
Early McIntosh
Fall Pippin
Gano
Gravenstein
Grimes Golden
Hyslop Crab
Jonathan
King David
Lady
Lowry
Maiden Blush
M. B. Twig
McIntosh
Milton
Nero
Northern Spy
N. W. Greening
Red Astrachan
Red Delicious (solid colored sport
Red Duchess (solid colored sport
Red Gravenstein (solid colored sport)
Red Jonathan (solid colored sport
Red Rome (solid colored sport)
Red Siberian Crab
Red Stayman (solid colored sport)
Rhode Island Greening
Rome Beauty
Smokehouse
Shotwell Delicious
Stayman Winesap
Summer Rambo
Sweet Bough
Sweet Paradise
Twentyounce
Virginia Beauty
Wealthy
Williams Early Red
Willow Twig
Wilson Red June
Winesap
Winter Banana
Wolf River
Yellow Delicious
Yellow Transparent
York Imperial

PLANT BUNTINGS' DOUBLY PROTECTED, TRUE TO NAME, WHOLE ROOT TREES

Buntings' Nurseries, Inc.

SELBYVILLE, DELAWARE

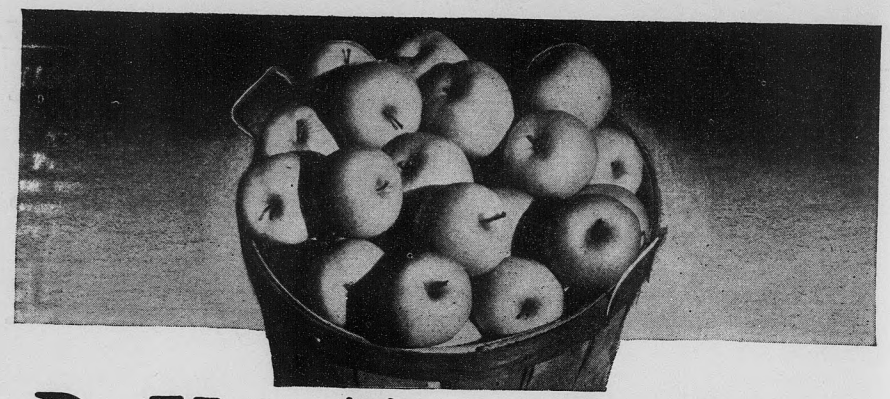
MORE THAN 1000 ACRES

Represented by

Harry T. Miller
Inwood, W. Va.

S. F. Ellington
Waynesboro, Va.

W. E. Dick
Route 4
Waynesboro, Pa.



Do Your Trees Produce Fruit Like This ?

FERTILIZE THEM WITH—

GRANULAR 'AERO' CYANAMID
EARLY THIS SPRING

—AND HARVEST A

PRIZE-WINNING CROP

—IN THE FALL

Every ton of Granular AERO Cyanamid contains 420 pounds of nitrogen, which feeds the trees evenly throughout the growing season; and, in addition, 1400 pounds of lime, which sweetens the soil and keeps it healthy.

Write for Leaflet F-142

CYANAMID PRODUCTS

AMERICAN CYANAMID COMPANY
30 ROCKEFELLER PLAZA NEW YORK, N. Y.